

ABSTRACT OF THE DISCLOSURE

A method for manufacturing a semiconductor device that comprises defining a semiconductor substrate, forming a gate oxide on the semiconductor substrate, forming a polycrystalline silicon layer over the gate oxide, forming a tungsten silicide layer over the polycrystalline silicon layer; providing a mask over the tungsten silicide layer, defining the mask to expose at least one portion of the tungsten silicide layer, etching the exposed tungsten silicide layer with a first etchant, wherein some tungsten silicide layer remains, etching the remaining tungsten silicide layer with a second etchant to expose at least one portion of the polycrystalline silicon layer, annealing the tungsten silicide layer, etching the exposed polycrystalline silicon layer, and oxidizing sidewalls of the tungsten silicide layer and the polycrystalline silicon layer.

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